

**STATIONARY SOURCE PERMIT TO OPERATE**  
**This permit includes designated equipment to**  
**New Source Performance Standards (NSPS).**

This permit supersedes your permit dated April 22, 2003.

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

Apex Oil Company  
2810 Rock Road  
Granite City, IL 62040  
**Registration No.: 60179**  
AFS Id. No.: 51-550-00028

is authorized to operate

a bulk petroleum product terminal

located at

428 Barnes Road  
Chesapeake, Virginia

in accordance with the Conditions of this permit.

Approved on **April DRAFT, 2005.**

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Director, Department of Environmental Quality (for)

Permit consists of 12 pages.  
Permit Conditions 1 to 29.

PERMIT CONDITIONS - the regulatory reference or authority for each condition is listed in parentheses ( ) after each condition.

## APPLICATION

1. Except as specified in this permit, the permitted facility is to be operated as represented in the permit applications dated May 13, 1998, November 12, 2002 and October 1, 2004 including amendment information dated June 8, 1998, June 17, 1998, June 25, 1998, January 23, 2003, December 6, 2004, January 25, 2005 and February 2, 2005. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.  
(9 VAC 5-80-830)
2. **Equipment List** - Equipment to be permitted consists of:
  - Tank 6: 2,215,000-gallon capacity
  - Tank 7: 2,254,000-gallon capacity
  - Tank 8: 2,254,000-gallon capacity
  - Tank 11: 3,133,000-gallon capacity
  - Tank 12: 3,150,000-gallon capacity
  - Tank 13: 3,056,000-gallon capacity
  - Additive tank: gasoline additive OGA 591 or equivalent, 12,153-gallon capacity
  - One (1) truck loading rack with two loading bays, total maximum loading capacity 52,800 gallons per hour gasoline or distillate.
  - One (1) activated carbon absorber vapor recovery unit (VRU)
  - One (1) barge loading operation, maximum loading capacity 153,000 gallons per hour distillate oil and/or Naphtha
  - Two (2) 19.9 million Btu/hour No. 4 fuel oil-fired boilers
  - Two (2) 6.4 million Btu/hour No. 2 fuel oil-fired hot oil heaters

3. **Tank Descriptions** - The storage tanks shall have the roof systems outlined in the following table:

Tank(s)	Tank Type/Roof Type
Tanks 6, 7, and 8	vertical/fixed
Tanks 11 and 12	vertical/internal floating roof with riveted deck, vapor mounted primary seal and rim mounted secondary seal
Tank 13	vertical/internal floating roof with welded deck, liquid mounted primary seal and rim mounted secondary seal
Additive Tank	horizontal/fixed

Tank roof systems which would result in lower hourly emissions under identical storage conditions may be utilized in the tanks in lieu of the specifically permitted system. The permittee shall furnish written notification of any proposed change in the specific roof system to the Director, Tidewater Regional Office. This notification shall include:

- a. Tank Number
- b. Permitted roof system
- c. Proposed roof system
- d. Engineering analysis showing the proposed roof system will result in lower hourly emissions than the permitted system under identical conditions.

A change in roof system may require a permit to modify and operate.

(9 VAC 5-170-160, 9 VAC 5-40-5220 and 9 VAC 5-40-5230 of State Regulations)

4. **Approved Storage Tank Service** - The permittee is authorized to store gasoline, with or without MTBE and additives and other petroleum products including naphtha in Tanks 11, 12 and 13, if the true vapor pressure is less than or equal to 11.1 psia at actual storage temperature. The permittee is authorized to store distillate oils and/or residual oils in Tanks 6, 7 and 8. A change in the products stored may require a permit to modify and operate.

(9 VAC 5-80-850 of State Regulations)

5. **Requirement by Reference** - All tanks shall comply with 9 VAC 5 Chapter 40, Part II, Article 37. The tanks shall be provided with adequate access for inspection.

(9 VAC 5-40-5220 of State Regulations)

6. **Requirement by Reference** - Tanks 11 and 12 shall comply with Federal requirements under 40 CFR 60, Subpart Ka.

(9 VAC 5-50-410 of State Regulations)

7. **Product Throughput Limits** - The annual throughput of petroleum products at the bulk terminal shall not exceed the limitations specified below, calculated monthly as the sum of each consecutive 12-month period.

Gasoline and naphtha (combined)	298,868,000 gallons
Naphtha	5,000,000 gallons
Distillate and Residual oil (combined)	71,248,000 gallons
Gasoline additive	35,000 gallons

(9 VAC 5-170-160 of State Regulations)

8. **Approved Loading Rack Service** - The permittee is authorized to transfer gasoline, with or without MTBE and additives, residual oil and distillate oil at the truck loading rack. A change in the products loaded may require a permit to modify and operate.

(9 VAC 5-170-160 of State Regulations)

9. **Hot Oil Heater Approved Fuel** - The approved fuel for the two (2) 6.4 million Btu/hour hot oil heaters is No. 2 fuel oil, which meets the ASTM specifications for numbers 1 or 2 fuel oil. A change in the fuel may require a permit to modify and operate.  
(9 VAC 5-170-160 of State Regulations)
10. **Boiler Approved Fuel** - The approved fuel for the two (2) 19.9 million Btu/hour boilers is No. 4 fuel oil, which meets the ASTM specifications for number 4 fuel oil. A change in the fuel may require a permit to modify and operate. The maximum sulfur content of the fuel oil burned shall not exceed 2.2% per shipment.  
(9 VAC 5-170-160 of State Regulations)
11. **Fuel Throughput Limit** - The throughput of No. 2 fuel oil for the two (2) 6.4 million Btu/hour hot oil heaters combined shall not exceed 200,000 gallons per year calculated monthly as the sum of each consecutive 12-month period.  
(9 VAC 5-170-160 of State Regulations)
12. **Fuel Throughput Limit** - The throughput of No. 4 fuel oil for the two (2) 19.9 million Btu/hour boilers combined shall not exceed 200,000 gallons per year calculated monthly as the sum of each consecutive 12-month period.  
(9 VAC 5-170-160 of State Regulations)
13. **Loading Rack Emission Control and Standard** - Volatile organic compound emissions from the truck loading rack shall be controlled by a vapor recovery unit. The vapor recovery unit shall not emit more than 35 milligrams of volatile organic compounds per liter of gasoline loaded. The vapor recovery unit shall be provided with adequate access for inspection.  
(9 VAC 5-80-850 of State Regulations)
14. **Approved Barge Service** - The permittee is authorized to transfer distillate oil, residual oil and naphtha at the barge loading operation. A change in the products loaded may require a permit to modify and operate.  
(9 VAC 5-170-160 of State Regulations)

15. **Naphtha Vapor Pressure** – The permittee shall determine the true vapor pressure of the naphtha in storage at least once each month. The vapor pressure of the stored naphtha shall not exceed 11.0 psia at actual storage temperature.

(9 VAC 5-170-160)

16. **Emission Limits** - Volatile organic compound (VOC) emissions from the operation of the bulk petroleum product terminal (including all fuel burning equipment) shall not exceed the limits specified below:

Storage tanks	19.0 tons/year
Truck and barge loading	53.3 tons/year
Fugitives	15.0 tons/year
Boilers/Heaters (Combined)	0.1 tons/year

Total facility-wide VOC emissions 87.4 tons/year

These emissions are derived from the estimated overall emission contribution from operating limits.

Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 3 - 14.

(9 VAC 5-80-850 of State Regulations)

17. **Emission Limits** - Emissions of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) from the operation of the bulk petroleum product terminal (including all fuel burning equipment) shall not exceed the limits specified below:

	<u>SO<sub>2</sub></u>	<u>NO<sub>x</sub></u>
Boilers/Heaters (Combined)	61.4 tons/year	4.0 tons/year
Total Facility-wide emissions	61.4 tons/year	4.0 tons/year

These emissions are derived from the estimated overall emission contribution from operating limits.

Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 9 - 12.

(9 VAC 5-80-850 of State Regulations)

18. **State Only Requirement**

**HAP Emission Limits** - Hazardous Air Pollutant (HAP) emissions from the operation of the bulk petroleum product terminal shall not exceed the limits specified below:

Benzene	0.3 tons/yr
Ethylbenzene	0.1 tons/yr
Hexane	0.8 tons/yr
Isopropyl benzene (cumene)	0.1 tons/yr
Methyl tert- butyl ether (MTBE)	9.1 tons/yr
Naphthalene	0.1 tons/yr
Toluene	0.5 tons/yr
Trimethylpentane, 2,2,4-	0.1 tons/yr
m-Xylene	0.2 tons/yr
o-Xylene	0.1 tons/yr
p-Xylene	0.1 tons/yr
Total HAPs (as VOCs)	11.2 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 3 - 8, 13, and 14.

(9 VAC 5-80-850 of State Regulations)

19. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier, including sampling and analysis representative of each shipment of fuel oil to be consumed by the heaters and the boilers. Each fuel supplier certification shall include the following:

- The name of the fuel supplier,
- The date on which the fuel oil was received,
- The volume of fuel oil delivered in the shipment,

- d. (for residual oil only) The sulfur content of the fuel oil,
- e. Documentation of sampling of residual oil delivered, indicating the location of the oil when the sample was drawn,
- f. (for residual oil only) The method used to determine the sulfur content of the residual oil delivered,
- g. A statement that the fuel oil complies with the American Society for Testing and Materials specifications for numbers 1, 2, 4, 5, or 6 fuel oil.

(9 VAC 5-170-160 and 9 VAC 5-20-110)

20. **Records** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Tidewater Regional Office. These records shall include, but are not limited to:
- a. The annual tank throughput of gasoline/naphtha, naphtha, distillate/residual oil, and gasoline additive, calculated monthly as the sum of each consecutive 12-month period;
  - b. Monthly records of the type of petroleum product stored in each tank, and the average monthly storage temperature and true vapor pressure of the liquid as stored. For naphtha, the true vapor pressure shall be based on the vapor pressure results from the monthly sample.
  - c. Records of MTBE concentrations in gasoline at the facility to verify the calculations that demonstrate compliance with Condition 18 of this permit;
  - d. Annual VOC and MTBE emissions from tanks, from the loading rack, from barge loading and from fugitive equipment leaks.
  - e. Records required under 40 CFR 60 Subpart Ka;
  - f. Records demonstrating compliance with 9 VAC 5 Chapter 40, Part II, Article 37, including the VOC standard to which each applicable tank is subjected and the method under 9 VAC 5-40-5230 which is used to meet the applicable VOC standard, or alternate control demonstration;
  - g. Tank inspection reports;
  - h. Results of true vapor pressure analyses on naphtha tank samples;
  - i. Maintenance records for all permitted equipment;



- j. Monthly throughput of No. 2 fuel oil for heaters (combined) and No. 4 fuel oil for the boilers (combined), calculated monthly as the sum of each consecutive 12-month period; and,
- k. All fuel oil certifications for fuel oil consumed by the heaters and boilers.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-80-900 of State Regulations)

## **GENERAL CONDITIONS**

**21. Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;
- b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
- c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and
- d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.

(9 VAC 5-170-130)

- 22. Notification for Control Equipment Maintenance** - The permittee shall furnish notification to the Tidewater Regional Office of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:
- a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;
  - b. The expected length of time that the air pollution control equipment will be out of service;
  - c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;

- d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.  
(9 VAC 5-20-180 B)

**23. Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Tidewater Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be made as soon as practicable but not later than four daytime business hours of the malfunction. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within 14 days of the occurrence. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify Tidewater Regional Office in writing.  
(9 VAC 5-20-180 C)

**24. Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.  
(9 VAC 5-20-180 I)

**25. Maintenance/Operating Procedures** - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

- a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
- b. Maintain an inventory of spare parts.
- c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

- d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

(9 VAC 5-50-20 E)

**26. Permit Suspension/Revocation** - This permit may be suspended or revoked if the permittee:

- a. Knowingly makes material misstatements in the application for this permit or any amendments to it;
- b. Fails to comply with the terms or conditions of this permit;
- c. Fails to comply with any emission standards applicable to the equipment listed in Condition 2;
- d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;
- e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect on the date that the application for this permit is submitted;
- f. Fails to comply with the applicable provisions of 9 VAC 5-80-10, and Article 8 and Article 9 of 9 VAC 5 Chapter 80.

(9 VAC 5-80-1010)

**27. Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Tidewater Regional Office of the change of ownership within 30 days of the transfer.

(9 VAC 5-80-940)

28. **Registration/Update** - Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact. The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.1-340 through 2.1-348 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.  
(9 VAC 5-80-900)

29. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.

(9 VAC 5-80-860 D)

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## **SOURCE TESTING REPORT FORMAT**

### Cover

1. Plant name and location
2. Units tested at source (indicate Ref. No. used by source in permit or registration)
3. Tester; name, address and report date

### Certification

1. Signed by team leader / certified observer (include certification date)
- \* 2. Signed by reviewer

### Introduction

1. Test purpose
2. Test location, type of process
3. Test dates
- \* 4. Pollutants tested
5. Test methods used
6. Observers' names (industry and agency)
7. Any other important background information

### Summary of Results

1. Pollutant emission results / visible emissions summary
2. Input during test vs. rated capacity
3. Allowable emissions
- \* 4. Description of collected samples, to include audits when applicable
5. Discussion of errors, both real and apparent

### Source Operation

1. Description of process and control devices
2. Process and control equipment flow diagram
3. Process and control equipment data

### \* Sampling and Analysis Procedures

1. Sampling port location and dimensioned cross section
2. Sampling point description
3. Sampling train description
4. Brief description of sampling procedures with discussion of deviations from standard methods
5. Brief description of analytical procedures with discussion of deviation from standard methods

### Appendix

- \* 1. Process data and emission results example calculations
2. Raw field data
- \* 3. Laboratory reports
4. Raw production data
- \* 5. Calibration procedures and results
6. Project participants and titles
7. Related correspondence
8. Standard procedures

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\* Not applicable to visible emission evaluations.